

P **Cinnamomum verum**

Common Name(s)

Ceylon Cinnamon, Cinnamon

How Used

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Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(+)-ALPHA-PHELLANDRENE	Leaf Essent. Oil	--	--		
38	(-)-EPICATECHIN	Bark	--	11	-1	
0	(E)(E)-FARNESOL	Leaf	--	9.4	-1.0000000000000002	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
0	(E)-BETA-OCIMENE	Leaf	--	--	-1.1406906611683263	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
0	(E)-CINNAMALDEHYDE	Leaf	--	295		Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
0	(E)-CINNAMYL-ACETATE	Leaf	--	345		Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation	
0	(E)-CINNAMYL-ALCOHOL	Leaf	--	--	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	(E)-METHYL-CINNAMATE	Leaf	--	9.4	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	(E)-METHYL-ISOEUGENOL	Leaf	--	9.4	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	(Z)-BETA-OCIMENE	Leaf	--	--	-0.7120892822452273	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
0	(Z)-CINNAMALDEHYDE	Leaf	--	9.4	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	(Z)-CINNAMYL-ACETATE	Leaf	--	9.4	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	(Z)-METHYL-ISOEUGENOL	Leaf	--	9.4	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	(Z)-OCIMENOL	Leaf	90	180	1		
0	(Z,E)-ALPHA-FARNESENE	Leaf	--	--	Mallavarupu, G. R. et al.	1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
67	1,8-CINEOLE	Bark	165	800	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
67	1,8-CINEOLE	Leaf	--	110	-0.5160756691181793	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
67	1,8-CINEOLE	Essential Oil	--	--		
67	1,8-CINEOLE	Leaf Essent. Oil	1500	6000	-0.8066353382387724	
67	1,8-CINEOLE	Bark Essent. Oil	--	16500		
67	1,8-CINEOLE	Stem Bark	--	--		
67	1,8-CINEOLE	Root Bark	--	--		
0	2-METHOXY-CINNAMALDEHYDE	Bark	--	--		
0	2-PHENYLACETALDEHYDE	Plant	--	--		
0	2-PHENYLACETALDEHYDE	Root Bark	--	--		
0	2-PHENYLETHANOL	Leaf	--	--	-1	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
0	2-PHENYLETHANOL	Root Bark	--	--		
0	2-PHENYLETHYL-BENZOATE	Bark	--	--		Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	2-PHENYLETHYL-BENZOATE	Leaf	--	38		Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
0	2-PHENYLETHYL-BENZOATE	Leaf Essent. Oil	--	--		
0	2-PHENYLETHYL-BENZOATE	Stem Bark	--	--		
0	2-PHENYLETHYL-PROPIONATE	Leaf	--	--		Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
0	2-VINYLPHENOL	Bark	3	12		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-VINYLPHENOL	Leaf Essent. Oil	--	--		
0	2-VINYLPHENOL	Stem Bark	--	--		
2	3-PHENYL-PROPYL-ACETATE	Bark	13	52		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-PHENYLPROPANAL	Bark	15	160	-1	
0	3-PHENYLPROPANAL	Leaf	8	20	-1	
0	5,7,3',4'-TETRAHYDROXYFLAVAN-3,4-DIOLS	Bark	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ACETOEUGENOL	Bark	16	64		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	ACETYL-EUGENOL	Root Bark	--	--		
5	ACETYL-EUGENOL	Leaf	--	--		Wealth of India.
0	ALCOHOLS	Bark	145	1665	1	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ALCOHOLS	Leaf	205	490	-0.5817589889794964	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ALDEHYDES	Bark	2650	30280	1	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ALDEHYDES	Leaf	120	290	-0.6572029876997948	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	ALPHA-HUMULENE	Leaf	--	55	-0.3746507691796979	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
2	ALPHA-HUMULENE	Leaf Essent. Oil	--	2000	-0.6471039886127844	
2	ALPHA-HUMULENE	Root Bark	--	--		
2	ALPHA-HUMULENE	Stem Bark	--	--		

	Chemical Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
11	ALPHA-PHELLANDRENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Root Bark	--	--		
11	ALPHA-PHELLANDRENE	Bark Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Stem Bark	--	--		
0	ALPHA-PHYLLANDRENE	Leaf	150	300		
28	ALPHA-PINENE	Bark	20	236	1	
28	ALPHA-PINENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	ALPHA-PINENE	Leaf Essent. Oil	--	2000	-0.7421534872468563	
28	ALPHA-PINENE	Root Bark	--	--		
28	ALPHA-PINENE	Bark Essent. Oil	--	2000		
28	ALPHA-PINENE	Stem Bark	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
13	ALPHA-TERPINENE	Plant	42	168	-0.2484193652689688	
13	ALPHA-TERPINENE	Leaf	90	180	-0.21935005723158335	
13	ALPHA-TERPINENE	Root Bark	--	--		
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	--		
13	ALPHA-TERPINENE	Bark Essent. Oil	--	--		
13	ALPHA-TERPINENE	Stem Bark	--	--		
23	ALPHA-TERPINEOL	Bark	40	264		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Leaf	--	47	-0.5077453073656415	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
23	ALPHA-TERPINEOL	Leaf Essent. Oil	--	1500	-0.8343397041375054	
23	ALPHA-TERPINEOL	Root Bark	--	--		
23	ALPHA-TERPINEOL	Bark Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation	
23	ALPHA-TERPINEOL	Stem Bark	--	--			
0	ALPHA-THUJENE	Leaf	--	19	-0.42779059232509187	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	ALPHA-YLANGENE	Bark	31	124			
0	ALPHA-YLANGENE	Leaf Essent. Oil	2500	10000	1		
0	ALPHA-YLANGENE	Bark Essent. Oil	--	--			
0	ALPHA-YLANGENE	Stem Bark	--	--			
0	ALPHA-YLANGENE	Root Bark	--	--			
0	ARABINOXYLAN	Bark	--	--			
112	ASCORBIC-ACID	Bark	309	309	0.13185661758936892	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses	
0	ASH	Bark	--	17000	-2.036112439574681	Wealth of India.	
0	BARIUM	Bark	60	60	-0.4394802124588286		
24	BENZALDEHYDE	Plant	26	104	-0.260515026268546		
24	BENZALDEHYDE	Bark	26	104			Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
24	BENZALDEHYDE	Bark Essent. Oil	--	--		
24	BENZALDEHYDE	Leaf Essent. Oil	--	7000	-1.4141473605881718	
24	BENZALDEHYDE	Stem Bark	--	--		
24	BENZALDEHYDE	Essential Oil	--	--		
24	BENZALDEHYDE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	BENZYL-ACETATE	Leaf Essent. Oil	--	--		
9	BENZYL-ALCOHOL	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	BENZYL-ALCOHOL	Root Bark	--	--		
17	BENZYL-BENZOATE	Bark	66	400		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
17	BENZYL-BENZOATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
17	BENZYL-BENZOATE	Essential Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
17	BENZYL-BENZOATE	Leaf Essent. Oil	26700	840000		
17	BENZYL-BENZOATE	Stem Bark	--	--		
17	BENZYL-BENZOATE	Root Bark	--	--		
53	BETA-CAROTENE	Bark	1	2	-0.7112344242846967	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	BETA-CARYOPHYLLENE	Leaf	30	60	-0.30545233114792647	
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil	--	18500	-0.2958052820826489	
0	BETA-CARYOPHYLLENE	Bark Essent. Oil	--	13500		
0	BETA-CARYOPHYLLENE	Stem Bark	--	--		
0	BETA-CARYOPHYLLENE-OXIDE	Leaf	--	47	1	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
5	BETA-ELEMENE	Leaf	--	120	0.21030818830483441	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
3	BETA-PHELLANDRENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	BETA-PHYLLANDRENE	Leaf	370	740		
13	BETA-PINENE	Bark	14	76	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-PINENE	Leaf	25	50	-0.355380082692983	
13	BETA-PINENE	Root Bark	--	--		
13	BETA-PINENE	Leaf Essent. Oil	--	--		
13	BETA-PINENE	Stem Bark	--	--		
3	BETA-SELINENE	Plant	--	--		
3	BETA-SELINENE	Leaf	--	9.4	-0.43052685171982463	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
3	BETA-SELINENE	Leaf Essent. Oil	--	--		
3	BETA-SELINENE	Stem Bark	--	--		
47	BETA-SITOSTEROL	Bark	--	210	-0.604451419169448	
35	BORNEOL	Bark	2	8		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
35	BORNEOL	Leaf	--	9.4	-0.4638760763380464	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
35	BORNEOL	Root Bark	--	--		
0	BORNEOL-ACETATE	Root Bark	--	--		
12	BORNYL-ACETATE	Bark	10	20		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	BORON	Bark	7	15		Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).
0	BROMINE	Bark	10	10	-0.707106781186548	
102	CAFFEIC-ACID	Bark	--	6		
28	CALCIUM	Bark	3415	6000	-1.211233459152872	
4	CALCIUM-OXALATE	Plant	--	--		
4	CALCIUM-OXALATE	Bark	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
2	CAMPESTEROL	Bark	--	30		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
9	CAMPHENENE	Bark	18	72		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
9	CAMPHENENE	Leaf	20	40	-0.17757340583671746	
9	CAMPHENENE	Root Bark	--	--		
9	CAMPHENENE	Leaf Essent. Oil	--	--		
9	CAMPHENENE	Bark Essent. Oil	--	--		
9	CAMPHENENE	Stem Bark	--	--		
41	CAMPHOR	Plant	--	--		
41	CAMPHOR	Leaf	--	5	-0.24878995860316278	
41	CAMPHOR	Essential Oil	--	--		
41	CAMPHOR	Root Bark	--	--		
41	CAMPHOR	Bark Essent. Oil	--	--		
41	CAMPHOR	Stem Bark	--	--		
0	CAR-3-ENE	Root Bark	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CAR-3-ENE	Leaf Essent. Oil	--	--		
0	CAR-3-ENE	Stem Bark	--	--		
0	CARBOHYDRATES	Plant	--	--		
0	CARBOHYDRATES	Bark	455000 500000	-2.3155236779419286	Wealth of India.	
31	CARYOPHYLLENE	Bark	135	1316		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Root Bark	--	--		
31	CARYOPHYLLENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Plant	--	--		
8	CARYOPHYLLENE-OXIDE	Leaf	25	50	-0.238829216533009	
8	CARYOPHYLLENE-OXIDE	Root Bark	--	--		
1	CATECHINS	Bark	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
7	CHLORINE	Bark	300	300	1.316395066083648	
24	CHROMIUM	Bark	2	10	0.3702364708647218	
24	CHROMIUM	Leaf	14.4	14.4	0.584311051219538	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
60	CINNAMALDEHYDE	Bark	6000	30000	1	
60	CINNAMALDEHYDE	Root	--	--		
60	CINNAMALDEHYDE	Root Bark	--	--		
60	CINNAMALDEHYDE	Essential Oil	--	800000		
60	CINNAMALDEHYDE	Leaf Essent. Oil	9700	31000		
60	CINNAMALDEHYDE	Bark Essent. Oil	302000	765000		
60	CINNAMALDEHYDE	Stem Bark	--	--		
18	CINNAMIC-ACID	Bark	--	--		
0	CINNAMIC-ACID-ACETATE	Essential Oil	--	--		
0	CINNAMIC-ACID-ACETATE	Bark Essent. Oil	--	--		
0	CINNAMIC-ACID-ACETATE	Stem Bark	--	--		
0	CINNAMIC-ACID-ACETATE	Root Bark	--	--		

	Chemical Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
1	CINNAMIC-ACID-ETHYL-ESTER	Leaf Essent. Oil	--	--		
1	CINNAMIC-ACID-ETHYL-ESTER	Root Bark	--	--		
0	CINNAMIC-ACID-METHYL-ESTER	Leaf Essent. Oil	--	--		
0	CINNAMIC-ACID-METHYL-ESTER	Root Bark	--	--		
3	CINNAMIC-ALCOHOL	Leaf	45	90		
3	CINNAMIC-ALCOHOL	Bark	--	--		
3	CINNAMYL-ACETATE	Bark	175	2040		
3	CINNAMYL-ACETATE	Leaf	--	--	Wealth of India.	
3	CINNAMYL-ACETATE	Leaf Essent. Oil	--	--		
6	CINNAMYL-ALCOHOL	Bark	26	104		
6	CINNAMYL-ALCOHOL	Bark Essent. Oil	--	--		
6	CINNAMYL-ALCOHOL	Leaf Essent. Oil	--	6000		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
6	CINNAMYL-ALCOHOL	Root Bark	--	--		
6	CINNAMYL-ALCOHOL	Stem Bark	--	--		
6	CINNAMYL-ALCOHOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CINNZEYLANIN	Bark	--	--		
0	CINNZEYLANINE	Bark	--	350		
0	CINNZEYLANOL	Bark	--	63		
0	CINNZEYLANOL-1-ACETATE	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	CIS-CINNAMALDEHYDE	Leaf	--	5		
0	CIS-LINALOL-OXIDE	Leaf	--	9.4	-1.3036858657021875	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
3	CIS-OCIMENE	Bark	3	12		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	CIS-OCIMENE	Root Bark	--	--		
20	CITRONELLAL	Leaf	--	185	-0.3689303556693406	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
2	COBALT	Bark	0.6	0.6	-0.535830732109577	
2	COBALT	Leaf	1.1	1.1	-0.29234734921022576	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CONIFERALDEHYDE	Plant	--	--		
0	CONIFERALDEHYDE	Bark	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	CONIFERALDEHYDE	Leaf	--	--		
12	COPPER	Bark	4.9	9	1.2694908990840155	
12	COPPER	Leaf	10.9	10.9	-0.4611536397349287	
57	COUMARIN	Bark	--	--		
57	COUMARIN	Leaf Essent. Oil	--	--		
57	COUMARIN	Stem Bark	--	--		
1	CUMENE	Bark	66	264		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
10	CUMINALDEHYDE	Bark	4	100		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
10	CUMINALDEHYDE	Leaf	--	9.4	-0.8992455208553981	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
10	CUMINALDEHYDE	Root Bark	--	--		
10	CUMINALDEHYDE	Bark Essent. Oil	--	2500		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation	
10	CUMINALDEHYDE	Stem Bark	--	--			
8	DELTA-3-CARENE	Bark	3	12			
8	DELTA-3-CARENE	Leaf	--	9.4	-0.3342459761013801	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.	
0	DIHYDROCINNAMALDEHYDE	Leaf	--	5			
0	DIHYDROFUMIGATIN	Bark	--	--			
0	EO	Bark	3500	40000	2.5284405308842266		
0	EO	Leaf	5000	12000	0.04089859630444273		
0	EO	Stem Bark	--	--			
0	EO	Root Bark	--	--			
12	ESTRAGOLE	Root Bark	--	--			
2	ETHYL-CINNAMATE	Plant	--	--			
2	ETHYL-CINNAMATE	Bark	--	--			
2	ETHYL-CINNAMATE				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.		
76	EUGENOL	Bark	140	3520	1.4140777354335337		
76	EUGENOL	Leaf	1400	16800	1.1576225529193598	Wealth of India.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
76	EUGENOL	Essential Oil	--	--		
76	EUGENOL	Leaf Essent. Oil	701000	945000	1.556183816708286	
76	EUGENOL	Bark Essent. Oil	61000	420000		
76	EUGENOL	Stem Bark	--	--		
76	EUGENOL	Root Bark	--	--		
1	EUGENOL-ACETATE	Plant	--	--		
1	EUGENOL-ACETATE	Bark	--	--	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.	
1	EUGENOL-ACETATE	Essential Oil	--	--		
1	EUGENOL-ACETATE	Leaf Essent. Oil	--	10000	1	
1	EUGENOL-ACETATE	Stem Bark	--	--		
1	EUGENOL-ACETATE	Root Bark	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
5	EUGENOL-METHYL-ETHER	Leaf Essent. Oil	--	--		
5	EUGENOL-METHYL-ETHER	Stem Bark	--	--		
6	EUGENYL-ACETATE	Leaf	--	1340	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.	
17	FARNESOL	Bark	3	12	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
17	FARNESOL	Leaf Essent. Oil	--	--		
17	FARNESOL	Stem Bark	--	--		
0	FAT	Bark	11000	14000	-0.3697573599609359	
0	FAT	Seed	300000	350000	0.44568382272451457	Wealth of India.
6	FENCHONE	Plant	--	--		
6	FENCHONE	Root Bark	--	--		
15	FIBER	Bark	270000	285000	1.2185093685993307	
6	FURFURAL	Bark	3	12	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
6	FURFURAL	Root Bark	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	FURFROL	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-CADINENE	Leaf	--	24	-0.2185114629097392	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
0	GAMMA-CADINENE	Leaf Essent. Oil	--	--		
11	GAMMA-TERPINENE	Bark	3	12		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Leaf	--	9.4	-0.35379884600546213	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
11	GAMMA-TERPINENE	Root Bark	--	--		
11	GAMMA-TERPINENE	Stem Bark	--	--		
0	GAMMA-TERPINEOL	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-YLANGENE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	GERANIAL	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	GERANIAL	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
13	GERANIAL	Stem Bark	--	--		
35	GERANIOL	Bark	6	24	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
35	GERANIOL	Leaf Essent. Oil	--	--		
35	GERANIOL	Root Bark	--	--		
35	GERANIOL	Stem Bark	--	--		
0	GERANIOL-ACETATE	Stem Bark	--	--		
5	GERANYL-ACETATE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GUM	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HEXAN-1-OL	Leaf Essent. Oil	--	--		
0	HEXAN-1-OL	Stem Bark	--	--		
0	HEXAN-1-OL	Root Bark	--	--		
3	HEXANOL	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	HUMULENE	Bark	20	124		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HYDROCINNAMALDEHYDE	Bark	15	160		
0	HYDROCINNAMALDEHYDE	Root Bark	--	--		
0	HYDROCINNAMALDEHYDE	Leaf	8	20		
12	IODINE	Bark	3	3	1	
6	IRON	Bark	60	421	0.988562022605988	
1	ISOCARYOPHYLLENE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
16	ISOEUGENOL	Bark	2	8		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
16	ISOEUGENOL	Leaf Essent. Oil	--	--		
16	ISOEUGENOL	Stem Bark	--	--		
0	ISOEUGENOL-METHYL-ETHER	Leaf Essent. Oil	--	--		
0	KETONES	Bark	2.5	28		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	KILOCALORIES	Bark	--	2410	-0.6493259969257941	Wealth of India.
7	LAURIC-ACID	Seed	260000	304000	2.213931627618294	Wealth of India.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	LEAD	Bark	--	--		
60	LIMONENE	Bark	46	184	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
60	LIMONENE	Root Bark	--	--		
60	LIMONENE	Leaf Essent. Oil	--	--		
60	LIMONENE	Bark Essent. Oil	--	--		
60	LIMONENE	Stem Bark	--	--		
0	LINALOL	Bark	230	956		
0	LINALOL	Leaf	195	390	-0.21159529821176554	
53	LINALOOL	Bark	85	956	1.252021111601008	
53	LINALOOL	Leaf Essent. Oil	--	15000	-0.6008669130496045	
53	LINALOOL	Twig	--	--		
53	LINALOOL	Root Bark	--	--		
53	LINALOOL	Bark Essent. Oil	--	23000		

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
53	LINALOOL	Stem Bark	--	--		
53	LINALOOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LINALOOL-ACETATE	Root Bark	--	--		
7	LINALYL-ACETATE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	LINALYL-ACETATE	Leaf	--	245	-0.4688164226239724	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
14	MANGANESE	Bark	66	140	0.2600672069684909	
14	MANGANESE	Leaf	101.6	101.6	-0.29098010466671564	
18	MANNITOL	Plant	--	--		
6	METHYL-CHAVICOL	Plant	--	--		
6	METHYL-CHAVICOL	Leaf	--	9.4	-0.7007235462901639	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
5	METHYL-CINNAMATE	Plant	--	--		
5	METHYL-CINNAMATE	Bark	--	--		Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
20	METHYL-EUGENOL	Bark	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
20	METHYL-EUGENOL	Leaf	--	--		Wealth of India.
2	METHYL-N-AMYLKETONE	Plant	--	--		
0	METHYL-VINYL-KETONE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	MUCILAGE	Bark	20000	37000	-1	
22	MYRCENE	Bark	5	20		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
22	MYRCENE	Leaf	--	42	-0.15751973810789113	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
22	MYRCENE	Root Bark	--	--		
6	MYRISTIC-ACID	Seed	21900	25550	0.03846837905572463	Wealth of India.
2	N-OCTANAL	Leaf	--	9.4		Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
10	NEROL	Plant	--	--		
10	NEROL	Leaf	--	120	0.11698444324247205	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
10	NEROL	Leaf Essent. Oil	--	--		
10	NEROL	Stem Bark	--	--		
39	NIACIN	Bark	8	8	-0.8750524278110635	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	NICKEL	Bark	1.1	1.1		
3	NICKEL	Leaf	4.2	4.2	-0.34807849536720104	
0	NONAN-1-AL	Leaf Essent. Oil	--	--		
0	NONYL-ALDEHYDE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	O-METHOXYCINNAMALDEHYDE	Bark	--	--		
18	OLEIC-ACID	Seed	11400	13300	-0.8697664023682266	Wealth of India.
25	OPCS	Bark	--	--		
9	OXALIC-ACID	Bark	--	--		
25	P-COUMARIC-ACID	Bark	--	14		
16	P-CYMENE	Bark	39	448		
16	P-CYMENE	Leaf	55	140	-0.2838019346125363	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
16	P-CYMENE	Leaf Essent. Oil	--	--		
16	P-CYMENE	Root Bark	--	--		
16	P-CYMENE	Bark Essent. Oil	--	5500		
16	P-CYMENE	Stem Bark	--	--		
13	PALMITIC-ACID	Seed	5400	6300	-0.569611607827188	Wealth of India.
0	PELARGONALDEHYDE	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	PHELLANDRENE	Bark	63	252		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
26	PHENOL	Plant	--	--		
26	PHENOL	Root Bark	--	--		
0	PHENOLS	Bark	85	4000	1	
0	PHENOLS	Leaf	3640	8735	-0.3513627655383646	
0	PHENYL-ETHYL-ALCOHOL	Bark	41	28		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PHENYLETHYL-ACETATE	Bark	7	164		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	PHENYLETHYL-ACETATE	Root Bark	--	--		
0	PHENYLPROPYL-ACETATE	Plant	--	--		
4	PHOSPHORUS	Bark	674	1100	-0.09218371064072212	
2	PHYTOSTEROLS	Bark	--	260		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
7	PIPERITONE	Plant	7	28	-0.5360935285937307	
7	PIPERITONE	Bark	7	28		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
7	PIPERITONE	Leaf	--	14	-0.3496122197337039	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
7	PIPERITONE	Leaf Essent. Oil	--	1000		
7	PIPERITONE	Root Bark	--	--		
7	PIPERITONE	Bark Essent. Oil	--	--		
7	PIPERITONE	Stem Bark	--	--		
14	POTASSIUM	Bark	5525	6000	-0.0003604452787617535	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	PROANTHOCYANIDIN	Bark	--	958		
0	PROANTHOCYANIDIN-A-2	Bark	--	2.6	-1.0000000000000004	
0	PROANTHOCYANIDIN-B1	Bark	--	2.1		
0	PROANTHOCYANIDIN-B2	Bark	--	42	-1	
0	PROANTHOCYANIDIN-B5	Bark	--	3.2	-1.0000000000000002	
0	PROANTHOCYANIDIN-C1	Bark	--	132	1	
34	PROANTHOCYANIDINS	Bark	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PROTEIN	Bark	35000	43000	1.6962679434572077	
15	RIBOFLAVIN	Bark	1	1	-0.703764278443471	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	RUBIDIUM	Bark	20	20	0.18031896828994254	
5	SABINENE	Bark	2	8		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	SABINENE	Root Bark	--	--		
5	SABINENE	Stem Bark	--	--		
0	SACCHAROSE	Plant	--	--		
29	SAFROLE	Plant	--	--		
29	SAFROLE	Leaf	--	--		Wealth of India.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
29	SAFROLE	Bark	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
29	SAFROLE	Leaf Essent. Oil	6500	23000		
29	SAFROLE	Bark Essent. Oil	--	--		
29	SAFROLE	Stem Bark	--	--		
29	SAFROLE	Root Bark	--	--		
7	SALICYLATES	Bark	--	150		
0	SESQUITERPENES	Bark	135	1535		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	SESQUITERPENES	Leaf	335	805	-1	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	SODIUM	Bark	287	287	-0.13196665474928823	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
12	STIGMASTEROL	Bark	--	20		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	STRONTIUM	Bark	80	80	0.9622504486493763	

	Chemical Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
14	SULFUR	Bark	1900	1900	1.6644794391276476	
35	TANNIN	Plant	--	--		
0	TANNINS	Bark	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TERPIN-4-EN-1-OL	Root Bark	--	--		
23	TERPINEN-4-OL	Bark	36	144		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	TERPINEN-4-OL	Leaf	580	1160	0.3220267983970355	
23	TERPINEN-4-OL	Root Bark	--	--		
23	TERPINEN-4-OL	Bark Essent. Oil	--	4000		
9	TERPINOLENE	Bark	11	44		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	TERPINOLENE	Leaf	--	24	-0.2015216107735257	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
9	TERPINOLENE	Root Bark	--	--		
0	TETRADECAN-1-AL	Wood Essent. Oil	--	498600		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
31	THIAMIN	Bark	1	1	-0.0940720868383599	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	TITANIUM	Bark	40	40	0.3015113445777637	
7	TRANS-CINNAMALDEHYDE	Leaf	60	335	-1	
7	TRANS-CINNAMALDEHYDE	Bark	2450	54000	1	
7	TRANS-CINNAMALDEHYDE	Bark Essent. Oil	--	470000		
0	TRANS-CINNAMIC-ACID	Plant	--	--		
0	TRANS-CINNAMIC-ACIDD	Plant	--	--		
0	TRANS-LINALOL-OXIDE	Bark	5	20		
0	TRANS-LINALOL-OXIDE	Leaf	--	9.4	-1.0000000000000002	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. <i>Flav. & Fragr. J.</i> , 10: 239-242.
0	TRANS-LINALOOL-OXIDE	Bark	5	20		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-LINALOOL-OXIDE	Root Bark	--	--		
0	TRANS-OCIMENE	Plant	--	--		
0	TRANS-OCIMENE	Root Bark	--	--		
28	VANILLIN	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
28	VANILLIN	Stem Bark	--	--		
0	WATER	Bark	--	107000	-2.016026635005471	Wealth of India.
77	ZINC	Bark	11.4	20	0.6897954075604908	
77	ZINC	Leaf	34	34	-0.3181095027627891	